IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Peter B. Madoff et al.	Art Unit	: 3621
Serial No.	: 09/272,542	Examiner	: Hewitt, Calvin
Filed	: March 19, 1999		
Title	: AUCTION MARKET WITH PRICE IMPROVEMENT MECHANISM		

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Commissioner for Patents
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REPLY BRIEF

Pursuant to 37 C.F.R. 1.93(b)(1), Appellant's response to arguments raised in the Examiner's Answer mailed on March 3, 2006 is as follows:

Rejection under 35 U.S.C. 101

The examiner withdrew the rejection of Appellant's claims under 35 U.S.C. 101, but maintained the rejection of claim 64, as directed to non-statutory subject matter.

The examiner argued that:

> **Claim 64 is directed to a "computer program product method of auctioning securities comprises instructions to cause a computer to".**
> **The MPEP is clear regarding computer programs,**
> **. .. a computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory (MPEP 21 00-1 3, "Non-Statutory Subject Matter" section 1 (a))**
> **Therefore, as Appellant's "computer program product method 'is not embodied on a computer readable medium it does not define statutory subject matter.**

The passage cited by the examiner does not specifically address "computer program product methods," and therefore is not controlling. Appellant contends that the controlling

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authority is found in 35 U.S. C. 101.[1] The statute addresses this claim by specifically defining statutory subject matter as embodying a process, which under 35 U.S.C. 100 must be construed to apply to a method.[2] Claim 64 specifically embodies a method and therefore is directed to statutory subject matter. This reasoning is consistent with the Board's unreported decision, as summarized by the Federal Circuit in *In re Lowry* 32 F.3d 1579 (Fed. Cir. 1994).[3]

In *Lowry*, the Board reversed the examiner's rejection of the claims under 101 as not being directed to statutory subject matter. The Board reasoned that because Lowry's preamble recited a memory, i.e., an article of manufacture, that the claim encompassed a statutory class of invention under 101. Here, as in Lowry, Appellant's claim 64 recites a statutory class of invention, a method, and thus the Board must reverse the examiner's rejection.

112 Rejection (First Paragraph)

The Examiner maintained the rejection of claims 3 and 24-32 as being non-enabled. The examiner urges on this Board an unwarranted and illogical interpretation of Appellant's claims. Using claim 3 as an example, claim 3 clearly recites that: "the price of the response changes with changes in the generally accepted indicator during the life of the order having an impact on the final price of the order."

The examiner argues that:

> **Claim 1, from which claim 3 depends, recites "entering responses to the order, at least some of the responses specifying a relative price with a price improvement". By Appellant's own admission, Appellant's claims are executed over**

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[1] 35 U.S.C. 101 Inventions patentable.
Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

[2] 35 U.S.C. 100 Definitions.
When used in this title unless the context otherwise indicates -
***
(b) The term "process" means process, art, or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.

[3] Board's decision as reported by the Federal Circuit in *In re Lowry* is controlling. The Board reversed the 35 U.S.C. § 101 rejection by the examiner finding that the claims at issue, claims 1 through 5, were directed to a memory containing stored information, which as a whole, recited an article of manufacture.

a distributed networked computer system (Appeal Brief, filed 20 October 2005, page 13, first full paragraph) and, in order to match an order with a response (third limitation of claim 1), the response has to be submitted over the distributed networked computer system. Therefore, Appellant has not disclosed to one of ordinary skill how the price of an entered response can be changed to reflect a change in a "generally accepted indicator". In order to effect such a change, one of ordinary skill would expect Appellant to teach or describe in Appellant's Specification at least a user entering an order, monitoring a "generally accepted indicator" and updating a response price based on the indicator. Appellant discloses a response having a fixed or relative price, or a pre- defined relative indication (Specification, page 9, lines 27-30) these are all fixed parameters and do not change in response to an indicator. And while, figure 9B describes a response having security, price, price improvement, and quantity parameters, where after construction the response is transmitted over a network and queued (Specification, page 18, lines 23-28), Appellant is silent regarding the price changing based on an indicator. In the context of Appellant's claims and Specification, a response specifying a price is entered and transmitted to a remote system for matching.

Therefore, in order to update this price, such that the response price can change with changes in an indicator, a user would have to re-access the submitted response or at least re-enter another response with the changed response. Appellant's Disclosure is silent such a process.

The Examiner did not misconstrue the features of claim 3. The Examiner only desires to see how the feature is accomplished.

Appellant contends that not only does the examiner misconstrue claim 3, but that the examiner also misconstrues Appellant's specification and misquotes Appellant's claim 1. Claim 1, from which claim 3 depends, recites that: "at least some of the responses specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price for the product." According to claim 1 therefore, the relative price of the response is relative to the generally accepted indicator. Claim 3 recites that: "the price of the response changes with changes in the generally accepted indicator ..."

The examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). According to the MPEP, as interpreting *Wright*, the examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure. The MPEP also mandates that a specification disclosure which contains a teaching of the manner and process of making and using an invention in terms that correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as being in compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, unless there is a reason to doubt the objective truth of the statements relied on for enabling support. See MPEP 2164.04.

The examiner has failed to meet his burden and has failed to question any statement in the specification. Rather, the examiner fashions an illogical and totally unsupported reading of the claimed feature. Absolutely nothing in Appellant's specification or claims can be reasonably construed as suggesting that some manual process is involved in having the price of a response change by a user updating the response or repetitively sending in new responses.

It is elemental patent law that: "A patent need not teach, and preferably omits, what is well known in the art." *In re Buchner*, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987); and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1463, 221 USPQ 481, 489 (Fed. Cir. 1984).

One of any skill in the computer arts could figure out how to implement the feature defined by claim 3. Clearly, all that is required is for the unskilled artisan to receive a feed containing the NBBO (an example of a prevailing market indicator) and use that feed with any specified price improvement as the price of the response, as Appellant amply describes. The exact computer implementation of this feature is immaterial to any of the teachings, since it is well within the skill of the ordinary person, and the examiner has not shown otherwise. The price of the NBBO can fluctuate during the life of the order, thus, the price of the response will likewise fluctuate according to those fluctuations in the price of the NBBO, as Appellant clearly describes and claims.

112 Rejection (Second Paragraph)

Claims 2, 20, 21, 24, and 77

The Examiner urges that claims 2, 20, 21, 24, and 77 are indefinite because they recite "an exposure time of less than or equal to about 30 seconds." Even though, the examiner acknowledges that the term "about" is clear but flexible, the examiner argues that: "the language 'at least about' was held by the courts to be indefinite (MPEP 21 00-21 7, 'About' *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.* (CAFC) 18 USPQ2d 101 6, 101 8, 1031)."

Appellant points out that claim 2 calls for "an exposure time of less than or equal to about 30 seconds." The claimed range for instance specifies that it is between 0 and about 30 seconds.

Amgen does not address this language but instead addresses "greater than about," "less than or about" and "no greater than or equal to about." Accordingly, the examiner should be reversed.

Claim 3

The examiner withdrew the 112 second paragraph rejection ("lack of antecedent basis") to claim 3, but maintained the 112 second paragraph rejection to claim 3, as indefinite.

Claim 3 is definite since it defines subject matter in a clear and concise manner, is supported by the specification and one or ordinary skill in the art would appreciate the bounds of this claim. The examiner has not pointed out any lack of antecedent basis in the claim but rather misconstrues and unnecessarily obfuscates the issues before the Board. Appellant has the right to claim his invention in the manner he so chooses. Thus, this claim is definite for the reasons discussed in the Appellant's Appeal Brief.

The examiner withdrew the 112 second paragraph rejection to claim 38.

Rejection under 35 U.S.C. 103

Appellant will deal with the subject matter in a manner that follows the Examiner's Answer.

Claims 1, 4-6, 9, 10, 13, 24-32, 35, 37, 73 and 76

"exposure time" and "auction markets"

The examiner in discussion of claims 1, 4-6, 9, 10, 13, 24-32, 35, 37, 73 and 76 contends that the Board originally reversed the examiner on the examiner's anticipation rejection based on Harrington. Appellant disagrees. The rejection that the Board reversed with respect to claims 1, 4-6, 9, 10, 13, 24-32, 73 and 76 was an obviousness rejection. The Board reversed an anticipation rejection of claims 33-39. (Board's decision pages 10 and 15-16)

"exposure time"

In attempting to distinguish the examiner's use of Silverman in the present rejection from the rejection previously appealed to this Board, the examiner stated:

The Board in its decision also stated that Silverman et al. do not teach exposure times [Board's Decision, page 16, lines 19-22). Hence, Appellant is stressing that Silverman's lack of an "exposure time" is sufficient for reversing the new rejection. However, the Examiner did not originally cite Silverman et al. as a teaching of exposure time but relied on Harrington et al.. (sic) Therefore, regarding "exposure time", the Examiner had not made a case for the system of Silverman et al. to teach this feature in light of what the Examiner believed has taught by Harrington et al.. (sic) On the other hand, using the Board's decision as a guide (Board's Decision, page 16, lines 10-12), the Examiner considered Silverman et al. more deeply and discovered that Silverman et al. does indeed teach exposure times. Specifically, Silverman et al. disclose "fill-or-kill" and "good 'till canceled" as time constraints ('501, column 21, lines 5-16) and recognizes each as defining a time for exposing a sell order as Silverman et al. regards each as a "DURATION" ('501, figure 19).

Appellant contends that the Board thoroughly addressed the teachings of Silverman in its decision.[4] The examiner now has considered Silverman more deeply and urges that order types "fill-or-kill" (FOK) and "good-until-cancelled" (GTC) correspond to teaching exposure time specified by the order.

Appellant has already distinguished these order types in Appellant's Appeal Brief. A fill-or-kill order must be filled at the time it is presented or killed, whereas a good-until-canceled order remains in the system until explicitly cancelled or until the end of the user's session. Neither order type however suggests an order that specifies an exposure time. No exposure time is specified by a FOK order or GTC order, nor does Silverman treat these orders as possessing any exposure times.

The examiner also urges that Silverman "recognizes each as defining a time for exposing a sell order as Silverman et al. regards each as a 'DURATION'." While Silverman indeed depicts "DURATION" in Figure 19, Silverman also depicts the acronyms FOK and GTC under the word "DURATION" in the table of Figure 19. Silverman does not depict or specify a time period or interval. Hence, this teaching adds nothing more to Silverman than what was already

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[4] The Board stated:

> Silverman appears to be a much closer (or at least easier to apply) reference to the claims. Silverman discloses "offers" ("sell" orders) and "bids" ("buy" orders or "contra side orders") in the context of an auction market, where bids and offers are automatically matched (col. 1, lines 18-26; example of bidding for ten million Yen and offering fifteen million Yen, col. 13, lines 27-28 and col. 13, line 56, to col. 14, line 15). The orders are compared against the oldest response where the price is the same (e.g., col. 17, lines 7-18). However, the claimed "orders" and "contra-side orders" have specified exposure times, which is not suggested by Silverman. Nor does Silverman teach specifying a relative price with a price improvement. The rejection of claims 5, 13, 26, and 73 over Harrington and Silverman is reversed. (Board Decision page 16).

described by Silverman and merely is included to point out the order type. While all orders in some sense have duration, that is not a substitute for nor reasonably suggests entering an order for a product by specifying in the order ... an exposure time for which the order can be displayed for responses.

The examiner also urges that Appellant seeks to read limitations into the claims from the specification. Appellant's claims and arguments are clear on their face and do not seek to read limitations into the claims. Appellant only urges the examiner to reasonably interpret the claims and consult the specification to obtain an understanding of the claimed subject matter.

In contrast, the examiner takes an unsupportable and unreasonable interpretation of Appellant's claims. For instance, in construing "an order specifying an exposure time" to read on "FOK and GTC" orders or the word "DURATION," the examiner ignores the guidance given by the Federal Circuit in *In re Morris* 127 F.3d 1048, 44 U.S.P.Q.2d 1023, 1027 (Fed. Cir. 1997). According to *Morris* the Office is entitled to construe claim terms using their "broadest reasonable meaning." The court provided guidance on what "reasonable" means:

> Since it would be unreasonable for the PTO to ignore any interpretive guidance afforded by the applicant's written description, either phrasing connotes the same notion: as an initial matter, the PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification. (Emphasis supplied)

According to Morris, the examiner must apply the broadest reasonable meaning to terms "in their ordinary usage as they would be understood by one of ordinary skill in the art." The examiner has not provided any basis upon which one of ordinary skill in the art would construe GTC and FOK orders to describe or suggest "an order specifying an exposure time." Moreover, in Morris, the specification lacked any text to guide the examiner in construing the disputed claim term. Based on the absence of any such text, the Court stated that the examiner's interpretation was reasonable:

> Absent an express definition in their specification, the fact that appellants can point to definitions or usages that conform to their interpretation does not make the PTO's definition unreasonable when the PTO can point to other sources that support its interpretation.

In the present application, the written description discusses exposure time in great detail and therefore there is no ambiguity, as there was in *Morris*. Nevertheless, by conflating GTC and FOK orders with "entering an order for a product by specifying in the order at least conditions of ... an exposure time for which the order can be displayed for responses," the examiner appears to be ignoring Appellant's specification in contravention of *Morris*.

The examiner relies on *In re Van Geuns,* 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993) in support of the proposition that one may not read limitations from the specification into the claims.

In *Van Geuns*, the specification disclosed a magnet assembly used for NMR. The claim, however, recited a magnet assembly that provided a uniform magnetic field, with no mention of NMR. The cited reference disclosed a magnet assembly that generated a relatively uniform field. *Van Geuns* is inapplicable to the present case, because the claim element "exposure time specified by the order" is expressly recited in the specification and positively recited in the claim. This is not a case in which the claim recites a mere "order" and the examiner is being asked to import from the specification the limitation of "an order specifying an exposure time." Instead, this is a case in which the claim recites "an order specifying an exposure time" and the specification sets forth what that feature is.

It is well established that in construing a claim term, the examiner may properly review the specification. In the present case, the examiner is attempting to construe "an order specifying an exposure time" without the benefit of the guidance offered by the Appellant's specification. In rejecting such guidance, the examiner has been cast adrift, so much so that he now confuses "GTC" and "FOK" orders with "an order specifying an exposure time" and therefore improperly rejects Appellant's claim.

"auction markets"

Although the Board is asked to revisit its prior decision and the Board's interpretation of Silverman as not disclosing exposure times, the examiner appears quite comfortable with the Board's view of Silverman as teaching auctions. In the Board's prior decision, the Board stated:

> Silverman discloses "offers" ("sell" orders) and "bids" ("buy" orders or "contra side orders") in the context of an auction market, where bids and offers are automatically matched (col. 1, lines 18-26; example of bidding for ten million Yen and offering fifteen million Yen, col. 13, lines 27-28 and col. 13, line 56, to col. 14, line 15).

Appellant does not disagree that Silverman mentions auction markets. Appellant strongly disagrees with a characterization that conflates offers with orders, as was previously argued by Appellant, and for which Appellant now has new evidence of record.[5] Appellant acknowledges that Silverman and Handa mention orders and contra-side orders. However, the references do not equate these to offerings, as the Board construed these terms in Harrington in its prior decision.[6] Appellant has sought to clarify this for the Board by citing definitions for these terms.

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[5] At the oral hearing, appellants sought to provide definitions from different sources for the terms "bid," "offer" and "order." These definitions are now part of the record that was before the examiner. Information Disclosure Statement filed on October 20, 2005.

[6] From the Board's Decision of March 29, 2005(Decision pages 7-8)

> "Financial terms have specialized meanings in the art[3] but we agree with the examiner that to the extent there may be a broader general definition, the broadest reasonable interpretation controls. The examiner's dictionary definition of "order" as a "commission or instruction to buy, sell or supply something" is consistent with the meaning in the art, which is an "instruction to a broker/dealer to buy, sell, deliver, or receive securities or commodities that commits the issuer of the 'order' to the terms specified." See Glossary at http://biz.yahoo.com." A "bid" is " [t]he price a potential buyer is willing to pay for a security." Id. The "ask" is "the lowest price an investor will accept to sell a stock . . . . [A]lso called the offer price." Id. An "offering" is the first sale of stocks or bonds to the public. Id. Thus, the "bid" and "offer" in Silverman are comparable to a "buy" order and "sell" order, respectively. Harrington discloses an "offering" for bonds, in particular, an original issue offering. Harrington describes an original issuer auction whereby the auction is conducted by an auctioneer hired by the Issuer to solicit and receive bids (col. 6, lines 36-37). We have wrestled with the examiner's reasoning that Harrington discloses an "order" because it is a commission or instruction to sell a financial product, and with the terminology that an "offer" can correspond to a "sell" order. In view of the claim breadth, we do not see error in the examiner's reading of "orders" on the "offerings" of financial products in Harrington.

These terms are now of record and these definitions clearly show that offers and offerings are not orders. However, even if the Board does not accept Appellant's clarification, the Board's construction of such terms in Harrington would not justify the examiner's reading of Silverman and Handa.

Silverman makes reference to auctions in the context of background information and as a variation of the system in Figures 15 and 16. Silverman teaches:

> **The behavior of an auction market, such as illustrated in FIGS. 15 and 16, is preferably dictated by the fact that there are at most one sub-book per side of a market. When an entry is worse than the current best entry, it is preferably rejected from the market. When an entry equals the current best entry, it is preferably accepted into the market and is positioned as the last entry in time order in the appropriate sub-book, such as shown in FIG. 15 by way of example. When an entry betters the existing value for the side of a market, the current entries in that side of the book are preferably cancelled, such as shown in FIG. 16 by way of example.**
>
> **Referring once again to FIG. 17 and 18, matching is only attempted, preferably, when the posting function indicates that the best bid value is better than or equal to the best offer value. The matching function is preferably the same for both book markets and auction markets. In a book market, it is possible for any order to cross the market; that is, for a new bid to be higher than the best offer or a new offer to be lower than the best bid. In this case, trades are preferably allowable at multiple quotes filling the order starting at the best quote and working down to the quote specified in the new order as necessary to trade as much quantity as possible. Since the quote depth for an auction market is only 1, just the bid side and the offer side of a market are submitted to matching. (Silverman Col. 17, lines 7-33).**

Silverman in FIGS. 15 and 16 is merely describing a version of the system that filters entries according to the then best entry in Silverman's book and positions those entries that enter as the last entry in time order in the appropriate sub-book. Even though Silverman mentions an auction in conjunction with FIGS. 15 and 16, Silverman describes a mechanism that uses an order book. In Silverman, entries that do not make it into the book are canceled. Thus, while Silverman mentions the word "auction," Silverman fails to teach an auction, as claimed, since *inter alia* Silverman teaches that: "matching is only attempted, preferably, when the posting function indicates that the best bid value is better than or equal to the best offer value." This indicates that Silverman triggers matching among buy and sell orders when the sides are

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3 At the oral hearing, appellants provided a number of definitions from different sources for the terms "bid," "offer" and "order." These definitions are not part of the record. It would have been more constructive to present these definitions to the examiner.

matched. Appellant contends that Silverman's discussion of "auction" in the Background fails to help the examiner apply Silverman and Handa to these claims.

Silverman's teachings do not suggest what Appellant claims. Nowhere does Silverman suggest the claimed feature of claim 1, for instance, "matching the order with a first one of the responses that meets all of the conditions specified by the order during the exposure time specified by the order, with matching of the first one of the responses with the order terminating the auction." That is, Silverman does not have a mechanism in which an order is exposed to a crowd to seek better responses over a specified period of time, i.e., "the exposure time" that is controlled by the order.

"price improvement"

The examiner states that "Appellant is of the opinion that the Examiner used Silverman et al. to teach "price improvement" (Appeal Brief, dated 10-20-05, page 24, last full paragraph)." The examiner is incorrect. Rather, Appellant acknowledged in Appellant's Appeal Brief that the examiner admitted that Silverman failed to teach "price improvement."[7]

Despite the examiner's statement that he does not rely on Silverman to teach price improvement, the examiner nonetheless advances a line of reasoning that is similar to one based on Harrington that was rejected by the Board in its prior decision. Based on Silverman and Handa the examiner now reasons that:

> **Silverman et al. clearly teach entering responses specifying a relative price to a generally accepted indicator and quantity ('501, figure 4 discloses incoming "bids" and "offers" where each bid and offer has a price and quantity- e.g. item 73 has a "value" or price of "138.86" and a "primary quantity" or quantity of "5.0"). Recall Appellant defines "relative price" as a price that is relative to a standard variable market price (Specification, page 8, lines 26-28) therefore a response with a price in Silverman et al. ('501, figure 4) is a "relative price" as it is relative to a generally accepted indicator such as the current price of the financial instrument (current price displayed in the ticker or the price entered as part of a sell order) displayed in the ticker or order book at the client (e.g. buyer or seller) workstation station ('501, column 11, lines 15-43; column 12, lines 8-68) (Note: Harrington et al. was not considered a valid teaching of "relative price" because a current price did not exist with the Harrington et al. system. In Silverman et al. this is not the case at least because traders view tickers and order books that display current market**

[7] Appellant stated: "The examiner does admit that Silverman et al. does not recite the term "price improvement." The examiner contends that Handa et al., "A Tale of Two Trading Venues: Electronically Delivered Orders vs. Floor Brokered Orders on the American Stock Exchange" teaches this feature." (Appellant's Appeal Brief page 24)

data- '501, column/line 11/15-12/68). Handa et al. disclose "price improvement" as an "important part of the price discovery process" and that both buy orders and sell orders can be priced improved (Handa et al., page 1, "Introduction", second paragraph), hence it would have been obvious to one of ordinary skill for a buyer responding to a sell order to incorporate "price improvement" into the price of the response.

The examiner interprets the Board's prior decision arguing that the Board failed to find that Harrington taught relative prices on the basis that the Board found Harrington did not have a current bid. Appellant disagrees.[8] In contrast, Appellant asserts that the Board held that Silverman did not suggest relative prices when the Board last looked at Silverman.[9]

The examiner now tries to construe Silverman as teaching entering responses with relative prices and combines that with Handa to teach relative prices with price improvement. The reasoning in this rejection is the same reasoning rejected by the Board, using Harrington. As with Harrington, the examiner urges that Silverman teaches a response with a price that is a "relative price" as it is relative to the current price of the financial instrument displayed in the ticker or the price entered as part of a sell order displayed in the ticker or order book at the client." The Board clearly rejected this notion when the examiner tried to apply a similar teaching in Harrington.[10] Appellant contends that Handa taken with Silverman do not suggest: "at least some of the responses specifying a relative price with a price improvement with the relative price being relative to a generally accepted indicator of a prevailing current market price for the product," as claimed by Appellant in claim 1.

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[8] In the Board's Prior decision the Board held regarding Harrington:

> "We agree with appellants that a "best bid" is not equivalent to a "generally accepted indicator of a prevailing current market price." In the original issue auctions described by Harrington, the auction is setting the market price; unlike a stock market or secondary market there is no available market price. However, assuming that a "best bid" is a "prevailing current market price" in the loose sense that it is what the market is willing to pay, it is not considered a "generally accepted indicator" because the bids are continuously changing and has only been accepted by one bidder." (Board's Decision page 12)

[9] Nor does Silverman teach specifying a relative price with a price improvement. The rejection of claims 5, 13, 26, and 73 over Harrington and Silverman is reversed. (Board's Decision page 16)

[10] In addition, while each incoming bid is a "price improvement" over the preceding bid, that bid is not a "relative price," which is defined as "being relative to a generally accepted indicator of a prevailing current market price," because there is no "generally accepted indicator of a prevailing current market price" and because the bid specifies an absolute price, not a price "relative" to the preceding bid. (Board's Decision bottom of page 12)

Appellant argued that Handa fails to teach price improvement, as claimed, not because Handa was done manually, but rather because: "Handa fails to suggest a technique requiring price improvement, as a price that is entered into a distributed system for conducting an auction based on a generally accepted indicator of a prevailing market price." Handa did not teach any mechanism for specifying price improvement in a response. Rather, the price improvement taught by Handa was a mere happenstance of the face to face meeting and was not related to any relative pricing mechanism.

Appellant also argues in the Appeal Brief that Silverman does not suggest the entity, which Appellant terms a "response." Appellant's "response" has claimed features that are not shared with orders and clearly not described by Silverman or Handa, as Appellant has argued consistently throughout prosecution of this application.

Claims 2 and 77

Regarding Claim 2, the examiner contends that the order types such as, good-till-canceled or fill-or-kill or Hawkins types of orders, Immediate-or-cancel, Good-until-crossed, or Good-until-executed, "could certainly occur within 30 seconds."

The examiner uses Hawkins teaching of an order creation program. Hawkins describes a time limit as:

> **Time Limit**
> **This field contains a code indicating the time limit or the date on which the Order is to expire; or both. One of the code words may be selected:**
> **CLO-At the closing.**
> **DAY-Good for the day.**
> **GTC-Good until canceled.**
> **GTE-Good until executed.**
> **GTM-Good for the month. 35**
> **GTD-Good through a date.**
> **GTX-Good until crossed.**
> **IOC-Immediate or cancel.**
> **OPN-At the open.**

Even this teaching does not suggest entering an exposure time. Moreover, the examiner focuses on the concept of "exposure time" in isolation. Appellant contends that not only does the examiner need to show an exposure time that is specified by an order, but the exposure time

needs to also meet the limitations of how it affects the auction. While Appellant does not dispute that one of those orders "could" be executed within 30 seconds that is not what claim 2 requires. Claim 2 requires that the exposure time specified by the order be less than or equal to about 30 seconds. Claim 1, from which claim 2 depends, requires the active step of entering an order for a product by specifying in the order ... an exposure time for which the order can be displayed for responses. These features are not suggested by something that "could" occur in 30 seconds.

Claim 3

The examiner interprets claim 3 as requiring that: "the prices of entered response reflect changes in a 'generally accepted indicator'." Appellant contends that claim 3 is clear on its face and there is no basis for the examiner to offer an interpretation. The examiner states that: "Appellant defines 'relative price' as a price that is relative to a standard variable market price (Specification, page 8, lines 26-28) ..." Since the examiner appears to seek guidance from Appellant's specification, it may be helpful for the Board to reproduce the entire passage from which the excerpt the examiner uses is taken. [11] In this manner, the Board can readily see how relative pricing with price improvement are described in the specification.

From this teaching and the examiner's reliance thereon Appellant cannot understand why the examiner insists on misconstruing this feature of Appellant's claims. Appellant can only assume that it is because the examiner is unable to find any prior art teaching that could possible be relevant to this claimed feature.

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[11] The passage from Appellant's specification is reproduced below:

> Aspects of the auction system rely upon relative prices. These prices are relative to a standard, variable market price. One standard pricing mechanism used in the auction system 10 when auctioning stocks is The National Best Bid/offer (NBBO). The NBBO is a standardized quote in the securities industry for the national market systems best consolidated quotation. The National Best Bid/Offer is a quantifiable price to buy and sell. The NBBO is always changing and could change during the life of an order having an impact on the final price. The relative pricing mechanism uses the NBBO and a price improvement "pi" to produce relative prices. The "pi" enables an order to achieve the best price in the market at the current time. The provision of the price improvement relative to the NBBO or other standard market quote would tend to improve the execution price relative to the spread, i.e., the difference between bid and offer prices for any product or security. It also facilitates decimal denominated trading by enabling small price improvements of one (1) cent or even less.

Claim 3 requires that the price of the response changes with changes in the generally accepted indicator (e.g., NBBO) during the life of the order having an impact on the final price of the order. For example, it is quite possible that a relatively priced response can get a better price for an order because the NBBO may fluctuate several or hundreds of times over the exposure period of the order. Contrary to the examiner's construction of Silverman, Silverman fails to teach the claimed "response" and fails to teach "relative price" and price improvement.

Claims 7, 38, 71, 72, 77 and 78

Appellant contends that Silverman does not teach "pre-defined relative indications," as recited in claim 7. Silverman does not teach entering responses as Appellant argued above, and does not suggest the claimed features of pre-defined relative indications as argued in the Appellant's Appeal Brief. Appellant clearly showed that the "not held" orders described by Handa do not suggest the claimed features of a pre-defined relative indication.

Appellant does not "deride the teaching because it is done manually (Appeal Brief, page 30, lines 5-10)." Rather, Appellant distinguishes from the manual teaching of Handa's "not-held order" because the "not-held" order does not possess the claimed features of a pre-defined relative indication. That is, *inter alia*, "the pre-defined relative indication of claim 7 is executed if it satisfies an order (no discretion) and seeks to give price improvement to the order entered in Appellant's system, not to itself, as does the "not-held order" described by Handa.

Appellant pointed out that Handa mentioned deficiencies in the not-held (Handa, footnote 7) in which an order can be filled at a worse price. Appellant concludes that one of the advantages of Appellant's pre-defined relative indication is that it avoids the less favorable price results obtained from the manual, subjective handling of the order. Accordingly, if Appellant's claim 7 merely recited an automated process that corresponded to the non-held order of Handa, then Appellant's pre-defined relative indication presumably would possess the same deficiencies described in Handa for the not-held order.

Claim 20

The examiner takes the position that in Silverman, submitting an order requires a user to enter price and quantity prior to transmitting the order to the matching system. The examiner incorrectly equates this to the feature that entering pre-defined relative indications can occur before or after an order is entered. However, the examiner originally argued that Silverman did not teach a pre-defined relative indication. How then can Silverman's teaching of orders that do not possess any of the features of the pre-defined relative indication be relevant to claim 20?

Claims 14-23

The examiner's argument regarding Silverman's "fill-or-kill" and "good-till-canceled" orders as time constraints was addressed above. These orders fail to suggest expiring the first one of the orders if no matching responses or contra-side orders are received during the exposure period.

Claims 33, 34, 36, and 39

Appellant has addressed the arguments of the examiner concerning exposure time, and entering a response to an order. On this basis alone, claim 33 distinguishes over Silverman and Handa. Claim 33 includes the feature of "a server process that for a first one of said orders, determines a match to said first order with the responses and contra-side orders during the exposure time specified by said first order." The examiner argues that:

> **Silverman et al. teach Appellant's "exposure times" as Silverman et al. disclose "fill-or-kill" and "good 'till canceled" orders ('501, figure 19; column 21, lines 5-16). Silverman et al. also teach providing users access to ticker and order book data at a user workstation ('501, figure 4; column 11, lines 15-43; column 12, lines 8-68) and that by observing market activity (e.g. ticker, order book) a user can decide whether to enter an order or response (e.g. offer, hit, take, or bid) ('501, column/line 6/60-7/5). Silverman et al. also disclose time stamps ('501, column 10, lines 54-58) and matching based on time precedence ('501, column 18, lines 51-53), hence there is necessarily a "first order". Handa et al. disclose contra-side orders (Handa et al., page 1, footnote 2; page 3, section 2). Therefore, the combination of Silverman et al. and Handa et al. teach determining a match with a first one of said orders with responses ('501, column/line 6/60-7/5) and contra-side (Handa et al.,**

page 1, footnote 2; page 3, section 2) orders during an exposure time ('501, figure 19) specified by said first order.

The disclosure of time stamps and time precedence fails to suggest "a server process that for a first one of said orders, determines a match to said first order with the responses and contra-side orders during the exposure time specified by said first order." Neither reference suggests the claimed responses nor does the combination of references suggest matching during the exposure time. Time stamps are indicia applied to incoming orders, e.g., the user entry record. Time precedence on the other hand merely determines the order of matching. Neither one of these features however are relevant nor suggest a period (the exposure period) over which the order is exposed (e.g., to the crowd) to invite responses and contra side orders.

Claims 40 and 65-70

Appellant has already addressed Silverman's failure to suggest entering responses and relative prices and an auction and Handa failure to suggest pre-defined relative indications, and price improvement.

As Appellant argued earlier, claim 40 possess three distinct entities: orders (of which there can exist a contra type), pre-defined relative indications, and responses. The examiner urges that: "a bid for an auctioned product as a 'willingness to buy' (i.e. spend money to obtain the product) while the fact the product is for sale in the first place, is at least a 'willingness to sell'." However, bids (and offers) are different sides of the same entity. They are the prices at which interest is expressed in the market.

Handa "not-held orders" again are orders. While possessing some features that are different than conventional orders, they nonetheless fail to suggest pre-defined relative indications. However, even with the examiner's construction of Handa and Silverman, the examiner fails to show the entity "responses."

Claims 55-58, and claim 64

The examiner argues with respect to this group of claims that:

Regarding "price improvement", Appellant points out that Appellant's claims are directed to an auction (Appeal Brief, page 26, last full paragraph). In an auction, one of ordinary skill would recognize that a goal is to outbid the prevailing bid, hence as Silverman et al. provide current market data to users (i.e. sellers and buyers) ('501, column/line 11/15-12/68) in order to win the auction, a buyer response price would have to exceed the prevailing bid (i.e. relative price) by some positive quantity (i.e. price improvement). Similarly, one of ordinary skill would also recognize that in order to make an offer more attractive a seller can offer a product for sale at a price lower than a current price. Hence, a seller offering a product for a sale at 48.95 ('501, figure 4- for examples of orders and responses comprising price and quantity parameters and figure 5 for a ranking of incoming offers and responses) when the current price is 49.00 is creating an offer with a price improvement of .05 (note: this price improvement is a minimum if the user cannot go an (Sic) lower and determines that this is her or his best offer).

Appellant contends that neither Silverman nor Handa suggest a mechanism for a response or pre-defined relative indication having a mechanism to offer price improvement. The examiner attempts to fashion an argument that is based on the premise that because Silverman teaches that: "in order to win the auction, a buyer response price would have to exceed the prevailing bid (i.e. relative price) by some positive quantity (i.e. price improvement)." However, Appellant is not able to find this teaching in Silverman at ('501, column/line 11/15-12/68) or elsewhere.

Appellant did find a teaching: "When a new bid goes in which betters the existing bid in an auction market, the existing bid is actually removed and effectively cancelled in the book. By way of example, an auction market is represented by FIGS. 15 and 16." (Silverman Col. 15, lines 63-67). However, that teaching does not meet the claimed limitations of ... the order specifying a condition that seeks a specific minimum relative price improvement and an exposure time for which the order can be exposed to responses or the limitations of ... the response specifying a price... a contra-side order that has a condition seeking a relative price improvement ... and matching the order with a first one of the response or the contra side order that satisfy conditions of the order and in accordance with the exposure time specified by the order.

Silverman does not specifically teach orders having a condition that seeks a specific minimum relative price improvement, and the examiner has failed to address this specific limitation in the claims.

For these reasons, and the reasons stated in the Appeal Brief, Applicant submits that the final rejection should be reversed.

Accompanying this Reply Brief is a Notice to Attend Oral Hearing.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 3/30/06

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